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NEW, CUTTING, WELDING, METALLURGICAL EQUIPMENT  
OFFERED BY INSTITUTES, PLANTS

DEVELOP NEW GAS CUTTERS -- Moscow, Vechernyaya Moskva, 9 Apr 51

Ordinary steels are cut by gas-cutting torches. The gas torch, however, will not work on high-chrome steels, chrome-nickel steels, or pig iron.

Research on this problem was started simultaneously by the Industrial Welding Chair of the Moscow Higher Technical School imeni Bauman and by the All-Union Scientific Research Institute for Autogenous Metal Processing. Both organizations solved the problem on their own. They then joined forces to put the results of their research into application.

The method was worked out for the so-called oxygen-flux metal cutting, and an original apparatus was built. This device blows out powdered flux in a stream of oxygen. The flux raises the temperature, liquefies the slag which is forming, and makes it possible for the oxygen stream to blow through the thickness of metal being cut. This new method is about 15 times more productive than mechanical cutting of metal.

The gas cutters are so designed that they can be operated either by hand or by special mechanisms. They can be set up on a special stand which makes it possible to cut out, according to a master pattern, a part of any configuration, including circles, pinions, and polyhedrons.

Several dozen of these new devices are now cutting stainless steel and pig iron.

A. Shashkov, director of the All-Union Scientific Research Institute for Autogenous Metal Processing, and others, including an engineer from the Krasnyy Oktyabr' Plant, were awarded the Stalin Prize for their work on the torch.

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MACHINES TO GO TO GES PROJECTS -- Moscow, Vechernyaya Moskva, 11 May 51

A gas welding device was recently developed at the All-Union Scientific Research Institute for Railroad Transportation which is capable of joining together pipes up to 150 millimeters in diameter, and solid metal rods up to 90 millimeters in diameter. The new unit is called a gas-press welding device. The machine is only one fifth the size of the electric welding machine which would be required to weld together rods 90 millimeters in diameter, and its cost is one tenth that of the electric machine.

The new gas-press welders, which are in use in railroad depots, have already paid for themselves within 6 months. The builders of the Volga-Don project are planning to use the new machines for large-scale welding work there.

MACHINE STRAIGHTENS RAILS, BEAMS -- Moscow, Vestnik Mashinostroyeniya, Mar 51

The Sverdlovsk Uralmash Plant has built a new cold-rolling mill designed for straightening rails and beams. The machine is electrically powered, having one motor for driving the main rollers, and another for feeding the vertical guide rollers.

Specifications are as follows:

Weight (tons)	337
No of main rollers	8
Barrel diameter (mm)	800
For straightening beams	700
For straightening rails	
Straightening speed (m/sec)	0.9-1.8
For beams	0.8-1.6
For rails	
Main electric motor	440
Power (kw)	300-600
Revolutions per minute	
Motor for feeding guide rollers	1
Power (kw)	965
Revolutions per minute	

NEW MILL EXCELS EARLIER MODEL -- Moscow, Izvestiya, 12 Apr 51

The Novo-Kramatorsk Plant imeni Stalin has just completed the second blooming mill built at the plant in recent years. It is considerably better than the first one.

BUILD SORTING MACHINE -- Moscow, Trud, 23 Mar 51

Engineers at the Kol'chugino Plant imeni Ordzhonikidze have built a special sorting machine which can pick out bits of ferrous and nonferrous metal from slag and dirt and sort them according to chemical composition and the mark of the alloy. It can process 1,000 kilograms of metal per shift.

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ASSEMBLERS OUTSTRIP PLAN -- Tashkent, Pravda Vostoka, 27 Apr 51

The assembly shop of the Andizhan Strommashina Plant is well ahead of the April plan in the assembly of the Andizhan-13 diesel engine. The plant is now preparing to produce an improved diesel engine, which will be used on agricultural machines and canal diggers.

PLEDGE MACHINES FOR MAY DAY -- Kishinev, Sovetskaya Moldaviya, 11 Apr 51

The Tiraspol' Plant imeni Kirov has begun to produce machines for crushing rock and other substances for molding sand. The workers have pledged to complete ten of these by May Day.

TURN OUT NEW COMPRESSORS -- Moscow, Moskovskaya Pravda, 29 Mar 51

The Moscow Kompressor Plant met its quarter plan on 28 March. It fulfilled its gross production quota 103.5 percent, and the commodity production quota 105 percent.

During the first quarter, the plant produced its first group of new, improved compressors. The plant sent the dairy industry some refrigeration units which draw off 100,000 calories per hour, maintaining a 33-degree temperature.

WILL BUILD BOILERS ON ORDER -- Moscow, Trud, 9 Mar 51

The Moscow Kotlotopstroy [Boiler and Heating Unit Construction?] Artel will make the following items for consumers supplying the raw material: water-heating boilers, of the Lancashire type, with heating area of 67, 100, and 120 square meters; of the Cornish type, with heating area of 13-46 square meters; of the vertical-tube type; and of the coil type, having a 1,200-2,000 liter capacity; autoclaves of 0.5-cubic-meter capacity, for vulcanizing rubber footwear; horizontal cylindrical cisterns of 3-10 ton capacity; baths for hot zinc plating; smokestacks of 400-1,000 millimeter diameter; iron drums of 100- and 290-liter capacity; beds with springs; metal cabs for ZIS-5 and ZIS-150 trucks; fireproof safes; containers for gas cylinders; crowbars, shovels, plowshares, moldboards; washers, clamps, and construction materials.

PNEUMATIC TOOL CLEANS, FINISHES -- Moscow, Vestnik Mashinostroyeniya, Mar 51

The Leningrad Pnevmatika Plant began series production of the ShR-06 hand grinder at the end of 1950. This tool is used for removing scale and cleaning small welded seams, finishing dies, and other grinding and cleaning operations.

The ShR-06 grinder consists of three basic units, the starting mechanism, rotary pneumatic motor, and spindle.

Specifications are as follows:

Maximum diameter of grinding wheel (mm)	60
Length of machine (mm)	426
Weight (kg)	2
Speed under load (rpm)	6,000
Power when air pressure is 5 atmospheres (hp)	0.3
Maximum air consumption under load (cu m/min)	0.7

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The machine was designed by S. G. Smirnov. The technology for its series production was worked out by V. I. Shalyapin.

PRODUCE MACHINE FOR GLASS INDUSTRY -- Moscow, Moskovskaya Pravda, 30 Mar 51

The Moscow Steklomashina Plant has established production of a unique automatic machine for making laboratory flasks and beakers. In a 24-hour period it will turn out about 30,000 articles. The new aggregate will replace about 200 workers.

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